U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

PB-255 284

ACCOMPLISHMENT PLAN, SOUTH PLATTE RIVER BASIN - - DENVER AREA

ENVIRONMENTAL PROTECTION AGENCY

JANUARY 1972

BIBLIOGRAPHIC DATA SHEET	1. Report No.	2.	3. Recipient's Accession No. PB-255 284
4. Title and Subtitle Accomplishment Plan, South Platte River Basin - Denver Area.			5. Report Date Jan 72 6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Organization Name and Address Environmental Protection Agency, Denver, Colo. Region VIII.			10. Project/Task/Work Unit No. 11. Contract/Grant No.
12. Sponsoring Organization Name and Address			13. Type of Report & Period Covered 14.

15. Supplementary Notes

16. Abstracts

A strategy to obtain recreation use classification upstream from Denver and a public water supply classification for the entire main stem is discussed.

17. Key Words and Document Analysis. 17a. Descriptors

*Water quality,
*South Platte River Basin,
Regional Planning,
Water pollution abatement,
Waste water,
Sewage,
Industrial wastes,
Colorado.

17b. Identifiers/Open-Ended Terms

17c. COSATI Field/Group 13 B,

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
National Technical Information Service Springfield, Va.	UNCLASSIFIED	56
	20. Security Class (This Page) UNCLASSIFIED	22. Price $4.50/$2.25

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ACCOMPLISHMENT PLAN
REGION VIII

SOUTH PLATTE RIVER BASIN - DENVER AREA

JANUARY 1972

JOHN A. GREEN
REGIONAL ADMINISTRATOR

DAVID D. EMERY
STRATEGY COORDINATOR

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APPENDIX A -- SUMMARY SCHEDULE

SECTION 1

GENERAL

The South Platte River Basin - Denver Area has been selected as one of Region VIII's highest priority areas for an abatement and control program for Fiscal Years 1972 and 1973. Denver is the largest metropolitan area within the Region, exceeds 50% of Colorado's population, and has the related industrial and commercial waste discharges. In addition, Denver has severe air quality problems. Heavy automobile use, unfavorable atmospheric conditions, and other conditions such as high altitude are factors which make Denver a critical air pollution area. This situation has caused Denver to be one of six cities with the highest national air improvement needs.

This Accomplishment Plan addresses the needs of the South Platte River Basin - Denver Area. Specific tasks and plans of accomplishment have been developed to set the course for meeting Region VIII's air and water quality objectives.

SECTION 2

BROAD OBJECTIVES

2.1 Water Quality

To improve quality of the South Platte River to permit beneficial uses not now provided as follows:

a. Water quality upstream from Denver will be improved to permit recreation, including swimming, and drinking water supply through reduction of fecal coliform levels. Existing fecal coliform levels will be reduced by approximately 50% to the compliance level of 100 per 100 ML by December 31, 1973.

b. Quality of water in the Denver area and downstream to the Colorado-Nebraska State line will be improved to permit drinking water supply and warm water fisheries through reduction of fecal coliform and through an increase in the dissolved oxygen level. Existing fecal coliform levels in excess of 10,000 per 100 ML will be reduced by 30% below Greeley, Colorado by December 31, 1972. Fecal coliform levels in the entire reach in and below Denver will be brought to the compliance level of 1,000 per 100 ML by December 31, 1976. Dissolved oxygen compliance level of 5.0 milligrams per liter will be met in this reach by December 31, 1976 through a reduction of 40,000 pounds of biochemical oxygen demand per

day by the end of 1972, and 95,000 pounds of biochemical oxygen demand per day by the end of 1976.

2.2 Air Quality

To obtain compliance with National Ambient Air Quality Standards in the Denver-Metro area for the three parameters not now in compliance as follows:

a. Reduce current average annual concentration of particulate matter by 50% July 1, 1975, to the primary standard of 75 micrograms per cubic meter and 70% by June 1, 1977, to the secondary standard of 60 milligrams per cubic meter.

b. Reduce average eight-hours concentration of carbon monoxide by 25% by July 1, 1975 and 50% by July 1, 1977 to meet the primary and secondary Air Ambient Standards of 10 milligrams per cubic meter.

c. Reduce average three-hour concentration of hydrocarbons and oxidants by 30% to meet the primary and secondary Air Ambient Standards of 160 milligrams by July 1, 1975 and 50% by July 1, 1977.

SECTION 3

SPECIFIC TASKS AND ACCOMPLISHMENT PLANS FOR WATER QUALITY IMPROVEMENT

3.1 Upgrade classification of the South Platte.

Purpose of the Plan

To develop a strategy to obtain recreation use classification upstream from Denver and a public water supply classification for the entire main stem.

Need for the Plan

Legal rights to the use of water from the South Platte for domestic supply exists throughout the South Platte Basin. Existing streams classification does not provide for this beneficial use. The South Platte upstream from Denver is presently used for body contact recreation and significant water-orientated recreation projects are under construction (Chatfield Dam) or proposed (Littleton Flood Plain Park). Present stream classification does not provide for body contact recreation, nor is such classification proposed by the State of Colorado.

Attempts to classify the South Platte for domestic water supply, in the opinion of the Colorado State Attorney General, was not accomplished in keeping with the necessary administrative procedures. Therefore, the State Water Pollution Control Commission must again go through the standard-setting process for the South Platte River and its tributaries to accomplish the desired upgrading.

3.1.1 Hold negotiations.

Approach and Milestones

The State of Colorado Water Pollution Control Commission by their early effort to upgrade the South Platte River has demonstrated the desire to upgrade water quality in this stream. The regional strategy is geared to make an immediate impact on the commission to encourage them to quickly take the steps necessary to adopt the desired classification in a manner that satisfies the procedural requirements of the State and Federal Government. This impact can be best achieved by marshalling the other state interests that support the Region's position to convince the Executive Committee of the urgency of the need for the reclassification and to then present the matter to the main body of the Colorado Water Pollution Control Commission. In this regard, EPA has established the following milestones:

1. Begin identifying and establishing contact with state agencies with an interest in water quality of the South Platte River to enlist support for the proposed upgrading of use classification, February 1, 1972.
2. Present position to Executive Committee of Colorado Water Pollution Control Commission at next scheduled meeting (date is currently unknown, probably late February, 1972).
3. Adoption of standards, June 30, 1972.

Unresolved Policy Issues and Constraints

The specific accomplishment date of this objective cannot be precisely identified due to the nature of the negotiations.

Project Manager: Patrick J. Godsil, Planning Section

3.1.2 Hold hearings.

Approach and Milestones

Convene Water Quality Standards hearing to upgrade the water quality standards in the South Platte River Basin if the State of Colorado fails to reclassify the South Platte and request the Administrator's approval. If necessary and timely, this hearing could be combined with the reconvened South Platte River Enforcement Conference hearings.

1. State of Colorado completes their reclassification procedures and submits changes to Administrator for approval. June 15, 1972. If this occurs, the need for a standards-setting conference is negated.
2. If the State of Colorado fails to take action as stated in Milestone 1 above, public notice for convening standards-setting conference will be published. July 15, 1972.
3. Standards-setting conference convened. September, 1972.
4. Changes in standards recommended to Administrator. October, 1972.
5. Approval of changes. January, 1973.
6. Full implementation of changes. December, 1976.

Unresolved Policy Issues

Present Colorado law does not recognize in-stream uses such as recreation, fishery, etc., as being beneficial water use. In order to fully implement our objectives, this legal viewpoint will have to be changed and it is planned that the conferees will consider this and recommend appropriate changes.

Project Manager: Thomas T. Rogers, Chief, Enforcement Branch

3.1.3 Develop Public Information Program on the need to upgrade use classification for the South Platte River.

Approach and Milestones

As a first step, EPA must work closely with State and local officials to develop a meaningful public relations program incorporating the ideas of all agencies concerned. From a Public Affairs standpoint, the public must be convinced of two facts: one, the South Platte can be upgraded to permit drinking water and recreational use; and two, in addition to treatment installation, etc., these uses may be threated if they are not legally protected. A number of suggestions for achieving this follow below:

1. Encouraging Colorado Magazine to publish a story or stories from the past, proving that trout fishing once was good in the South Platte and suggesting that it can be again.
2. Utilizing EPA-Log, the regional publication, outlining in detail each time what is being accomplished in the way of clean-up, who is doing the work and obstacles yet to be overcome.
3. Coordinating programs with citizen, student and youth groups, publicizing the situation and interesting them in the crusade to upgrade the South Platte. Clean-up or grass planting programs to be undertaken, accompanied by publicity.
4. Radio spot saturations, informing the public of current developments and prospects for the future.
5. Aiming for domestic and contact recreational uses of the South Platte in time for Colorado's 100th anniversary and the Nation's bi-centennial celebration.

Project Manager: Jack R. Hallowell, Public Affairs Division

3.2 Ensure adequate provision for present and future water needs and waste loads.

3.2.1 Survey waste water treatment facilities.

Purpose of the Plan

This plan involves an evaluation of selected municipal waste water treatment facilities to assess the needs and direct the regional activities to effect improved operation and maintenance practices at facilities within the area addressed by this plan.

Need for the Plan

More efficient operation and maintenance practices of waste water treatment facilities can provide improved effluent quality. This improved effluent quality in turn allows an improvement in the quality of the receiving stream.

Plants will be selected for evaluation based on input from the Denver Regional Council of Governments (DRCOG), the State Department of Health, the County Health agencies, EPA's National Field Investigations Center at Denver, and cities and sanitary districts.

Each facility to be visited will be evaluated to determine the following information:

1. With present facilities and loadings, is the operation and maintenance adequate to achieve an optimum level of performance with regard to BOD_5 and suspended solids removal?
2. Are laboratory control procedures and staffing practices adequate to maintain a consistently high quality effluent?

3. Could operational practices at this facility be applied at other facilities to improve their performance?

4. What are the projected loads on the plant and what is the short-term needs for waste water treatment works construction?

5. How effective are present disinfection practices in reducing bacterial solution (i.e., coliform concentration in the effluents discharge to surface waters)?

6. Would operation training help to improve performance and thus effluent quality?

7. Would other regional resources such as Research and Monitoring, laboratory assistance, technology transfer information, etc., improve performance and thus effluent quality?

As a guide to determining this information, a standard performance evaluation questionnaire (FWPCA Form 12) will be utilized at each facility visited. Results or findings of each evaluation will be reported to the municipalities or sanitary districts involved and to the Colorado State Department of Health and other interested agencies.

The representatives to serve as the three-man field survey team for EPA are as follows:

1. Joseph D. Lipps, Manpower Development and Training, Air and Water Programs Division.

2. Max Orem, Operation and Maintenance, Air and Water Programs Division.

3. Bob Hegg, Operation and Maintenance, Surveillance and Analysis Division.

The planned activities, including arranging survey appointments, will be coordinated with State offices and with the DRCOG prior to arranging specific appointments with the various plant superintendents.

Plants have been selected in the Metropolitan Denver area for initial evaluation. It is anticipated that this list will be expanded as the operation and maintenance evaluation progresses and as more input is received by the various agencies involved.

The following represents the initial list of facilities:

1. City of Longmont plant.
2. City of Brighton plant.
3. City of Englewood plant.
4. City of Littleton plant.
5. South Lakewood Sanitary District plant.

Several plants outside of the metro area have been recommended for evaluation and assistance. However, initial focus will be on Denver-Metro area. Future efforts will attempt to include these facilities outside this area.

Interrelationships

A brief summary of the interrelationships that exist are outlined below:

1. Colorado State Department of Health.

   The State Department of Health has responsibility for operation and maintenance of waste water treatment facilities within its

boundaries as well as authority to enter these facilities to make various inspections. The State is, therefore, aware of those facilities which may need assistance and also can assist in gaining access to these facilities. Therefore, to be successful in the accomplishment plan, will require full cooperation and approval from the Colorado State Department of Health.

2. County Health Departments.

   Several counties have specifically requested EPA to inform them of all our activities that are to be conducted in their county in order that they may plan to have personnel accompany EPA on proposed surveys. Notification of our planned survey activities will be given to the appropriate counties.

3. National Field Investigations Center (EPA) at Denver.

   The National Field Investigations Center (NFIC) recently completed a survey of numerous waste water treatment facilities in the Metro-Denver - South Platte area. Although the results of this survey are not yet published in report form, NFIC can provide valuable information concerning the plants in the selected target areas.

4. Denver Regional Council of Governments (DRCOG).

   DRCOG is also planning an evaluation survey of the plants in the Metro-Denver area. It has been established, however, that DRCOG's objectives do not conflict or overlap those included in this plan.

It is important to point out that valuable information will be collected by DRCOG and lines of communication will be established and maintained throughout EPA's survey to allow a free exchange of information concerning activities and results.

5. Metropolitan Denver Sewage Disposal District No. 1.
   Many of the plants in the area are satellite plants to MDSDD #1. This, in addition to other planned activities, will necessitate keeping MDSDD #1 well informed of our planned activities.

6. Cities and Sanitary Districts.
   The cities and sanitary districts that operate the various treatment facilities will be kept informed of our planned survey activities. It is anticipated that the State Department of Health will assist in this activity.

Results and Milestones

The results expected from surveyirg wastewater treatment facilities will be a list of those facilities where regional resources can be used to effect improved water quality.

Complete the survey of the five selected plants in the metropolitan area. March 1, 1972.

Complete evaluation of data collected and make recommendations concerning follow-up actions. April 1, 1972.

Project Manager: Stanley M. Smith, Municipal Waste Water

3.2.2 Provide Training and Technical Assistance.

Purpose of Plan

To develop a program for and initiate action to provide technical assistance and training to upgrade operation and maintenance for waste water treatment facilities.

Need for Plan

The need for the plan will be determined by the Accomplishment Plan which provides for an initial O&M survey of facilities and an evaluation of their operation, maintenance, training, and technical assistance needs.

Approach

Those facilities selected for follow-up assistance will be provided formal or on-site training. Typical assistance projects will consist of the following:

1. Provide formal training to plant operators concerning operation of wastewater treatment facilities.

2. Provide on-site training in conducting and interpreting control tests for the purpose of controlling the plant's operation.

3. Provide training in conducting laboratory analyses so that the plant's performance can be monitored.

4. Investigate various unit processes and plant facilities to determine if modifications or different facilities would be desirable.

5. Monitor plant performance and report on changes in effluent quality. Also make recommendation as to operational modes to be sued, plant modifications that would be of benefit, maintenance procedures to be followed, etc.

Following the O&M survey and interpretation of results, a meeting will be held with the State, DRCOG, and other interested parties to establish a priority list of the plants that are to receive follow-up assistance. This meeting is scheduled to be held prior to April 15, 1972. Follow-up programs will be initiated by May 1, 1972. Again, these dates are only to be used as guidelines since the results of the evaluation survey can be highly variable.

Results

Results expected from this Accomplishment Plan are improved performance and effluent quality.

Milestones

No specific milestones can be established since these are a function of the outcome of the O&M survey.

Project Manager: Stanley M. Smith, Municipal Waste Water Branch

3.2.3 Expedite construction schedules.

Purpose of Plan

To complete a feasibility study of the Metro-Denver Sewage Disposal District No. 1 program for sewage treatment plant improvements and determine if earlier construction date is possible.

Need for Plan

The Metro-Denver Sewage Disposal District No. 1 treatment project consists of a $20,000,000 improvement program to increase plant capacity, upgrade treatment efficiency, and provide for adequate sludge disposal. The project is currently divided into two parts: a $9,000,000 project and an $11,000,000 project. A grant offer has been made for the part of the project with an estimated $9,000,000 cost. An application is pending for the $11,000,000 portion.

Based on the $9,000,000 project, the District is committed to placing the project under construction approximately 540 days after the grant offer was accepted, which would be approximately April 15, 1973. Another 540 days is estimated as necessary to complete construction of the project which would be approximately October 15, 1974. It is estimated that the $11,000,000 portion of the project would require the same general schedule of elapsed time to complete construction and place the project in operation.

Since this plant has considerably more impact on water quality in the South Platte River than any other plant in the metropolitan area, water quality improvement in the river will be closely related to the date by which the $20,000,000 improvement project can be completed. It is felt that a feasibility study might show the possibility of reducing either the time required to prepare and receive approval of the plans and specifications or the time required for construction of the project, or both.

At the present time, the District's consulting engineer is working on the engineering study preliminary to the preparation of final plans and specifications. Local financing of the project must also be

accomplished before it can be placed under construction. This is complicated by pending Federal legislation and whether or not State matching grant funds will be available. At the present time a bond election seems to be indicated to meet local financial needs.

Approach and Milestones

Tender a grant offer to the District for the $11,000,000 portion of the project by April 1, 1972 with the condition that this portion of the project be placed under construction no later than the time required for the first portion of project and with the condition that construction be completed in no less than 540 days after contracts are awarded and in substantially less time if possible.

Following completion of the preliminary engineering study, it is proposed that a meeting or series of meetings be held with the District, the District's consulting engineer, and the Colorado Department of Health to explore possibilities of setting an earlier completion date. Consideration will be given to the following means for reducing the time for completion of the project:

1. Reduce the time required for preparation of plans and specifications, either without increased cost to the applicant or with increased cost.

2. Reduce the time required for review and approval of plans and specifications through pre-construction meetings between regulatory agency personnel, District personnel, and their consultants.

3. Reduce the time allowed for construction by asking bidders to submit alternate bids based on different completion dates and comparing the extra cost for completion dates of less than 540 days against the benefits to be obtained by improved water quality.

Project Manager: Stanley M. Smith, Municipal Waste Water Section

3.2.4 Develop efficient utility management program for the Denver public waste water treatment system.

Need for the Plan

The present water and sewage rate structure of Denver-Metro Sewage Disposal District No. 1 does not discourage excessive water use and thus, may contribute to overloadings in the system, contribute to the need for larger than necessary treatment facilities, and not provide adequate financing for necessary upgrading, replacement, and expansion of the treatment system.

Approach and Milestones

Conduct a study to address the following major points:

1. Application of a utility management concept to the waste water treatment system.

2. The adequacy of the charges and the institutional arrangement of the system for meeting financial requirements in operation, maintenance, upgrading, replacement, and expansion in the waste water treatment system.

The study will be conducted by contract administered by the assigned project officer. Coordination is necessary between the Planning, Water Supply, and Municipal Waste Water Sections of the Air and Water Programs Division. External coordination is necessary with the Denver Regional COG 3(c) project and the Denver Metropolitan Sewage Disposal District No. 1 to ensure implementation of study findings.

The study will provide a financing system capable of meeting the present and future waste water treatment needs. Such a financing system would incorporate the Federal, State, local, residential, industrial, and commercial responsibilities for waste water loadings, growth, and upgrading into a revenue-producing and capital-raising arrangement.

Rate structures geared to users' loading should result in a reduction in total loadings on the treatment system, thereby reducing immediate overloadings and future plant requirements.

The following milestones are incorporated in the plan:

1. Meet with Denver Metro and 3(c) project manager to discuss ongoing and pending utility management studies. January 21, 1972.

2. Determine required contract needs to supplement ongoing and pending studies. March 1, 1972.

3. Discuss EPA contract scope with Metro interests and finalize request for contract proposals. March 15, 1972.

4. Select contractor. May 15, 1972.

5. Initiate contract. June 1, 1972.

6. Complete study. November 1, 1972.

7. Present results to Denver Metropolitan interests and negotiate for adoption of results. December 1, 1972.

Project Manager: Patrick J. Godsil, Planning Section

3.2.5 Develop program on optimizing water use, emphasizing reduction in water usage and recycling.

Purpose of the Plan

To decrease water use and institute an effective reuse program, so as to decrease future water diversions.

Need for the Plan

Denver's annual per capita water use is about 225 gallons per day. This is higher than the national average but is not inconsistent with other municipalities in Region VIII.

About the only large industrial influence on Denver water usage is the Public Service Company's plant, which uses large quantities of water for cooling purposes. Therefore, most of the high water use is due to domestic uses, lawn watering and landscape irrigation, especially during the summer and fall months.

Another important factor is that only 33% of Denver's water connections are metered. Generally, unmetered accounts show larger water use than those that are metered because of the lower "flat rate" structure. The experience has been that once meters are installed the water use goes down.

Even if metering and water conservation efforts realized significant decreases in water use, they would not offset the burgeoning M & I demands of the projected population and industrial growth for the Denver-Metro area. An additional source being extensively studied by the Denver Water Board is water reuse. However, based on the intensive studies being conducted at Lake Tahoe, Windhoek, South Africa and Dallas, Texas, it will be some time before reclaimed wastewater is used directly for domestic purposes because:

1. Much better methods for sampling and testing are needed for virus. Viral diseases such as infectious hepatitis are quite serious and the etiological agents of these diseases have been found in highly treated wastewaters.

2. More research must be done on the buildup of trace organics and inorganics, including carcinogens and toxic synthetics such as polychlorinated biphanyls.

3. The reliability of wastewater reclammation plants to consistently produce a quality effluent is being questioned due to faulty maintenance and improper operation.

In view of these public health considerations, this Agency must take the stand that the use of reclaimed wastewaters for public water supply purposes should be deferred until research and development demonstrates that such use will not endanger the health of the public and adversely affect the potability of the water supply.

However, domestic use of water (i.e., drinking, bathing, dishwashing) is actually a small part of a municipality's total water requirement.

Definite possibilities do exist for the use of reclaimed water by those industries which do not require a high quality process water and for such uses as landscape irrigation on public parks, golf courses and freeways.

The Denver Water Board has recognized these possibilities and is currently conducting an in-depth study of the reuse situation. This study involves a wastewater reclammation pilot plant, an evaluation of where the reclaimed water could be used and how the public would accept such a concept.

Approach

Optimizing water use in the Denver area will be a laborious task. First, reliable water use data will have to be gathered in order to determine where the major efforts should be directed. Therefore, enlisting the support of the water utilities is all important. On the basis of the data, public information programs could be directed toward saving water by better lawn watering and in-the-home practices. Tips on optimum lawn watering rates and frequencies will be developed with the assistance of the county extension service. The beneficial effects upon the lawn from proper watering (deeper rooting, less insect infestation, etc.) should be stressed in addition to the economical and ecological benefits. Eliminating waste in the home is much harder to accomplish, but tips could be developed on how to save water in everyday washing, bathing, etc.

The Denver-Metro area has many parks, public golf courses and green belt areas which require extensive watering during the summer. These are for the enjoyment of the public and there would certainly be an outcry if they were allowed to burn up. However, water savings could be gained if

tighter controls were used. Cooperation between the water utility and the respective city parks department is essential in working out a proper watering schedule. The approach would be to set up a trial meeting between the two (with the extension service involved) to explore the possibilities of cutting down on water use. If successful, other meetings could be held.

The Denver metering policy will be reviewed. The Water Board will be urged to inaugurate a program to reach near 100% metered connections. (Any changes which this Agency might recommend in the metering practices would not be binding on the utility since there is no legal basis to do this.)

Water reuse is being studied for implementation in the Denver area during the 1980's. Any public information program will be coordinated with the Denver Water Board. The purpose will be to illustrate to industry and the public why reuse is necessary, what types are being considered and what effect this will have on them.

Milestones

The following milestones are incorporated in the plan:

1. Contact state and local health departments, Denver Regional Council of Governments and water utilities to explain water optimization plan. February 5, 1972.

2. Review detailed water usage data of the various billing categories, such as single residences, parks, industrial, commercial, and wholesale accounts. Detailed data would also need to be reviewed from sewage treatment plants as to input flows to be

able to determine consumptive and non-consumptive water use when compared with data obtained from the Denver Water Board. March 1, 1972.

3. Meet with the Denver Water Board to discuss ways of optimizing water usage and how an information program could be mutually beneficial. Gaining their assistance and support at this stage is critical. March 15, 1972.

4. Develop a public information program on the basics of reducing water usage and possible ways of reuse. June 1, 1972.

5. Continue to coordinate with the Denver Water Board and assist them with their program of public and industrial acceptance. To make available to them any EPA research results relevant to water reuse.

Unresolved Policy Issues

The Water Supply Branch does not have sufficient staff to accomplish this mission as higher priorities exist, namely (1) the interstate carrier water certification program, (2) the state evaluation program, and (3) the municipal water supply inventory. To accomplish this program would mean minimizing something else, or, conversely, the Water Supply Program needs more professional staff. A decision needs to be made to resolve this dilemma.

Project Manager: Albert V. Soukup, Water Supply Branch

3.3 Process 50 permits.

Purpose of the Plan

This plan is to identify and describe the role and accomplishments the Permits Branch is planning as part of the South Platte River Basin strategy to reduce the wastes discharged to the South Platte River. Waste water flows and concentrations will be reduced through the implementation of the Permit Program by setting special conditions in each permit that will require industries to meet water quality standards and to discharge effluents that have received no less than the equivalent of secondary treatment. In many cases, industries will be placed on implementation schedules that will extend for one year or more.

Approach

The work will be carried out principally by the Permits Branch of the Enforcement Division, but with the aid of the Surveillance and Analysis Division, Management Division (Computer Branch), and Air and Water Programs Division (Planning Section). It represents an ongoing effort by the Processing and the Engineering Sections in which all of the work items included in the milestones move forward simultaneously.

Inspections in the Denver SMSA will be carried out by the Surveillance and Analysis Division and coordinated with the Colorado Water Pollution Control Commission, Denver County Health Department, Tri-County (Adams, Arapahoe, and Douglas) Health Department, and the Jefferson County Health Department. Management Division support is planned for such items as updating and implementing computer programs, key punching data, etc. Water quality standards, metropolitan planning outputs, and systems analysis work

are expected from the Air and Water Programs Division.

Milestones

The following milestones constitute the Permits Branch's plan of action that will, in effect, reduce the industrial waste discharges to the South Platte River and aid in upgrading the quality of the water. It is estimated that the special conditions incorporated in the permits will effect reductions of BOD discharged to the river of 45,000 lb/day by December, 1972 and 65,000 lb/day by December, 1976.

1. Processing of permit applications in the Cache La Poudre and St. Vrain Creek subbasins completed. January 15, 1972.

2. Inspections in the Denver SMSA for the purpose of identifying uninformed or non-complying industries completed. March 1, 1972.

3. Completed applications obtained for all significant industries. March 1, 1972.

4. Requests for state certification completed for all significant industries. March 1, 1972.

5. Interim effluent monitoring plan developed for the major industries, April 1, 1972; plan finalized on July 1, 1972.

6. Technical reviews of applications from significant industries in South Platte River Basin completed; special permit conditions set to meet water quality standards, secondary levels of treatment, planning and institutional requirements, and water quality

criteria set forth by the Bureau of Sport Fisheries and Wildlife and coordinated with state departments of health; recommendations to Corps of Engineers completed. June 1, 1972.

Unresolved Policy Issues

In a recent court decision, a Federal judge concluded that permits could not be issued for industrial wastes discharged to non-navigable streams and for discharges to navigable streams, unless an environmental impact statement precede issuance of each permit. Both facets of this decision could have far-reaching impacts on the South Platte River, a non-navigable stream.

Under existing policy developed between the Administrator and the House Agriculture Committee, the Permit Program has been constrained with regards to its applicability to feed lot operations. Only those feed lots having more than 1,000 animal units and having man-made point discharges of wastes presently fall under the Permit Program. The number of animal units criteria in this policy removes about 90% of the Basin's feed lots from the Refuse Act authority and the point-discharge stipulation removes most of the remaining large operations that have diffuse discharges and cause water quality problems in the South Platte River Basin.

Project Manager: B. David Clark, Permits Branch

3.4 Sample and monitor industrial outfalls and ambient stream conditions.

Approach

Review water quality data collected along the South Platte River and its tributaries to determine existing quality and identify sources of

contaminants. Field studies will be conducted on reaches of the main stem and tributaries for which sufficient data are not available. Inspections of industries will be conducted to ensure full compliance with the Permits Program. Where necessary, industrial outfalls will be sampled to determine quality characteristics and their impact on receiving waters.

Milestones

1. Existing water quality of the South Platte River and its tributaries will be determined from the Division of Field Investigations report on the 1971 water quality investigation in the South Platte River Basin, STORET data, and other pertinent sources. Although all the water parameters for which data are available will be summarized and displayed in appropriate graphical arrays, the parameters of critical importance are total and fecal coliform bacteria, dissolved oxygen, biochemical oxygen demand (BOD), and nutrients. The Surveillance and Analysis Division will encourage and provide support to other governmental agencies conducting monitoring activities in the Basin to place their past and any future data in the STORET System. February 15, 1972.
Project Leader: Lester D. Sprenger

2. In accordance with the recommendations of the Permits Branch, Enforcement Division, inspections of suspected industries will be carried out to determine compliance or the lack thereof. Effluent studies will be conducted in those cases where the company-furnished data on effluent characteristics are incomplete or suspect.

This activity was initiated in December, 1971, and will be completed by February 1, 1972. By January 15, 1972 fifty-eight industries had been inspected and one field study completed (Allied Chemical's Jamestown Mine--discharge to Little James Creek).

3. Coincident with Milestone 1 (above), water quality data will be reviewed to identify the areas of the South Platte River and tributary streams for which the available information is inadequate. Correspondingly, a field investigations program will be designed, describing the time schedule, sampling locations, and the appropriate parameters for fully describing existing quality and sources of contaminants.

One area of primary concern will be the South Platte River upstream from Denver. In order to implement the objective of achieving a 50% reduction in fecal coliforms, a field study will be necessary to determine the primary source--effluents from municipal plants, agriculture, or unreliable sampling and analysis procedures. March 1, 1972.
Project Leader: John E. Hardaway

4. Commencing on or about March 1, field studies (if necessary) will be started by the Surveillance and Analysis Division to provide the necessary analytical data. Although it is possible that the Surveillance and Analysis Division may be able to meet all existing commitments with judicious scheduling of sample analyses, the need to obtain assistance from one of the two national enforcement groups (DFI--Cincinnati or Denver) in order to meet all Regional commitments cannot be totally discounted. June 1, 1972.
Project Leader: John R. Tilstra

5. A comprehensive report will be prepared wherein data obtained from the Field investigations program, as well as pre-existing information, will be formalized in appropriate graphical and statistical arrays to describe the current water quality, sources of contaminants, and the impact of industrial and municipal outfalls on receiving waters. July 1, 1972.

Project Leader: John E. Hardaway

6. The existing monitoring program for the South Platte River Basin will be upgraded as necessary to determine the success of the South Platte water quality improvement strategy. This will be a coordinated and mutually cooperative study with the State of Colorado.

Incoming data from the developed monitoring program will be received and pollution alert notices forwarded to the Enforcement Division for action on follow-up investigations by the Surveillance and Analysis Division. By January 15, 1972, four such notices in the Basin had been issued. July 1, 1972.

Project Leader: Lester D. Sprenger

Project Manager: John E. Hardaway, Surveillance and Analysis Division

3.5 Hold Enforcement Conference.

Approach

Reconvene South Platte River Enforcement Conference to present the report of the 1971-1972 water quality survey and set future goals for future improvements in water quality.

Milestones

1. Complete field survey by DFI-DC. January, 1972.

2. Complete draft of report. March 30, 1972.

3. Forward final survey report to conferees for review. May 1, 1972.

4. Publish the public notice for reconvening the conference. May 30, 1972.

5. Reconvene the conference. June 27, 1972.

6. Administrator approval of the conferees recommendations. September 1, 1972.

7. Begin implementation of the conferees recommendations. September 15, 1972.

Project Manager: Thomas T. Rogers, Chief, Enforcement Branch

3.6 Issue 180-day notices.

Approach

The following enforcement actions will result in an upgrading of the water quality in the South Platte River below Denver.

Milestones

1. Issuance of 180-day notice for violation of Nebraska and Colorado Water Quality Standards to Great Western Sugar Company Refinery, Ovid, Colorado. March, 1972.

2. Meet with company officials. April, 1972.

3. Convene public hearing in Denver. May, 1972.

4. Adequate waste treatment facilities in operation which reduce BOD_5 load to South Platte River by 16,000 lb/day. October, 1972.

5. Water quality in the South Platte upgraded to comply with fecal coliform criteria of 1000/100 ml and D.O. criteria of 5.0 mg/l in a 30-mile reach downstream - Ovid, Colorado. October, 1972.

6. Issuance of a 180-day notice for violation of Colorado Water Quality Standards to Great Western Sugar Company Refinery, Greeley, Colorado. March, 1972.

7. Meet with company officials. April, 1972.

8. Convene public hearing in Denver. May, 1972.

9. Adequate waste treatment facilities on line which reduce BOD_5 load to the Cache La Poudre and South Platte Rivers by 17,000 lb/day. October, 1972.

10. Reduction of the present high coliform levels in the Cache La Poudre and South Platte Rivers by approximately 50%. October, 1972.

Project Manager: Thomas T. Rogers, Chief, Enforcement Branch

3.7 Develop water quality management plans for the South Platte River Basin, the Denver SMSA, and the Larimer-Weld Counties regional planning areas as required by 18CFR601.

Purpose of the Plan

The metropolitan plan for Metro Denver will be completed by the DRCOG 3(c). A regional plan will be developed for Larimer and Weld counties under the direction of the Larimer-Weld Counties Planning Commission. The Basin plan will be formulated by the State Department of Health, Water Pollution Control Division. Regional assistance through direct personnel and by appropriate planning grants will be utilized.

Approach and Milestones

1. Assist State and Larimer-Weld Counties Planning Commission in developing work plans for achieving basin and regional planning. Underway.

2. Determine resource requirements needed to assist State and Larimer-Weld Counties Planning Commission in developing basin and regional plan. April 1, 1972.

3. Commence intensive assistance to State and Larimer-Weld Counties Planning Commission in support of basin and regional planning efforts. May 1, 1972.

4. Complete basin and regional plans. July 1, 1972.

Unresolved Policy Issues and Constraints

State and local planning jurisdictions do not have resources to meet rigid accomplishment date. At present, EPA does not have adequate resources to assure meeting the rigid accomplishment date.

Project Manager: Patrick J. Godsil, Planning Section

3.8 Supplement DRCOG 3(c) planning activity to achieve allied regional objectives for the South Platte Basin.

Purpose of the Plan

The planning grant activity now underway for the Denver SMSA is limited in its ability to achieve all Region VIII objectives for the metropolitan area. Early review indicates that areas of work allied to the DRCOG 3(c) work program which requires Region VIII supplemental resources include:

1. Development of effluent standards for all discharges in the study area.

2. Establishment of the location and responsible party of all industrial discharges within the study area.

3. Development of a waste allocation model for the South Platte River Basin.

Approach and Milestones

A regional task force will be developed to provide continuous liaison between Region VIII and DRCOG.

1. Assign Regional Liaison Officer. January 7, 1972. (George Hartmann, Planning Section)

2. Identify Regional Task Force for technical review of DRCOG 3(c) planning study. January 12, 1972

3. Convene meeting of task force. January 17, 1972.

4. Task force meeting with DRCOG 3(c) consultant. By January 28, 1972.

5. Based on task force evaluation of 3(c) study and meeting with consultant, prepare report on supplemental resources required to achieve allied Region VIII objectives.

6. Implement work plan to achieve results of milestone 5. February 15, 1972.

Project Manager: Patrick J. Godsil, Planning Section

3.9 Develop Control Program for Oil and Hazardous Materials.

Purpose of the Plan

To protect the water quality and prevent damage to beneficial uses in the South Platte from spills of pollutional materials into the South Platte and its tributaries.

Need for the Plan

Spills of pollutional materials have been experienced in the past. These have caused problems at water treatment facilities, have interfered with aesthetic enjoyment of the streams and undoubtedly have had a detrimental effect on aquatic life. As abatement and control measures are taken to upgrade municipal and industrial effluents, periodic spills could have a more dramatic effect on stream biota and other legitimate uses and could largely negate the benefits from significant investments to improve effluent quality.

Approach and Milestones

Two approaches are being pursued. The first is the development of a mutual aid group, consisting of Federal, State, and local government agencies and companies in the area. This group will develop plans for notification and reaction to emergency spills, train personnel, and maintain equipment which will be able to respond to spills immediately with the capability of containing the spilled material. These groups will develop, within the group or by outside assistance, the capability of removing the spilled material, or of treating it so as to negate its effect on the environment.

The second approach is the development of contingency plans in the South Platte Basin. The procedure to be followed will vary, depending on whether the potential hazard relates to a discharge for which a Refuse Act Permit is required.

Where a permit is required, the application will be reviewed for installation of "fail-safe" systems to avoid spills and accidental discharges. Permit conditions will be developed requiring adequate controls where indicated.

Where hazardous materials are stored, warehoused, or otherwise not associated with a discharge for which a Refuse Act Permit is required, an inventory of the locations and quantitites of such materials will be developed cooperatively with the State, DRCOG, other governmental entities and private industry.

Milestones

The following are milestones in the implementation of the plan:

1. Development of a Mutual Aid Group or groups.
   a. Primary contact, February 15, 1972.
   b. Formation of group, 1st meeting - May 1, 1972.
   c. Basic development of group, contingency plan, obtainment of equipment and training of personnel - May 1, 1973.
2. Contingency plan from non-discharging facilities.
   a. Inventory started, March 1, 1972.
   b. Primary sources contacted, June 1, 1972.
   c. Most, if not all, sources contacted, October 1, 1972.
   d. Plans received from primary sources, September 1, 1972.
   e. Investigation of primary sources, December 1, 1972.
   f. Plans received from most or all sources, December 31, 1973.
   g. Investigation of all other sources, March 1, 1973.

Unresolved Policies on Issues

For hazardous materials not associated with a discharge for which a Refuse Act Permit is required, authority to obtain an inventory of materials will presumably rest on the basic right of the State to act to protect the health and welfare of citizens of the state. There may be some question as to whether a contingency plan can be required under present state legal authority. If such plans can be requested only on a cooperative basis, considerable cooperation by industry can still be expected.

Project Manager: Richard M. Jones, Surveillance and Analysis Division

SECTION 4

SPECIFIC TASKS AND ACCOMPLISHMENT PLANS FOR AIR QUALITY IMPROVEMENT

4.1 Problems assessment and proposed solutions relating to mobile source pollutants.

Purpose of the Plan

Improvements in air quality resulting from the Federal Motor Vehicle Emission and Fuel Standards Program will not be sufficient to obtain compliance. Changing the mode of commutes, transportation, and emission controls on existing automobiles may be needed to achieve the standards for these associated pollutants. It is anticipated that the State Air Pollution Control Implementation Plan, submitted by January 30, 1972, will need revisions concerning the aforementioned problems.

Approach and Milestones

a. Problem Assessment.

1. Report on existing information concerning possible increased susceptibility of people in Denver to pollutants. It has been stated at various public meetings and in the newspapers that because of Denver's altitude, people are more susceptable to pollutants and further, that the Federal standards are not sufficiently protective of the people's health.
March 1, 1972.

2. Report on existing information concerning effectiveness of Federal Motor Vehicle Program as it applies to Denver. Because of Denver's altitude, effectiveness of controls may differ from that at sea level.
April 1, 1972.

3. Report on the reduction in air pollution which can be anticipated from application of the Federal Emission Standards for Moving Sources. Estimations in the State Plan were made assuming some control achievements as those obtained at sea level. May 1, 1972.

4. Report on the reduction in air pollution which might result from a State Motor Vehicle Inspection emission program. June 1, 1972.

5. Report on the effectiveness and applicability of various transportation control options for reducing pollutants in Denver. July 19, 1972.

6. Complete control strategy as needed for revision of State Air Pollution Control Implementation Plan. August 1, 1972.

b. Proposed Solutions.

1. Regularly scheduled meetings (i.e., monthly) with the State Air Pollution Control Agency and Commission to inform them of EPA activities and to keep abreast of their activities in the area of mobile source pollution. March-September 1972.

2. Regularly scheduled meetings with appropriate State and/or local transportation agencies to inform them of EPA needs and to stimulate their participation in traffic management for air pollution control purposes. March-September 1972.

3. Develop and implement a public information program to focus attention on automobile pollutants, mass transportation, and public acceptance of changes in mode of commuting. This activity will include a series of newspaper articles in the Sunday Environmental Section of the Denver Post,

radio, and television spot announcements, educational television spot announcements, educational television programs, and billboard and "car cards" in buses. April 1972. (See Section 4.3)

4. Impact the state, county, and city legislation changes needed to implement control strategies which involve either restriction of use of the automobile or promotion of mass transit systems. (Continuing.)

Project Manager: Dale Wells, Air Quality Section.

4.2 Problems assessment and proposed solutions relating to particulate matter.

Purpose of the Plan

Controlling of stationary point source emissions and other conventional control techniques (open burning, etc.) will not result in achievement of the secondary standards for particulate matter. It is anticipated that the State Air Pollution Control Implementation Plan will need revisions concerning control of particulate matter pollution. Road dirt and other fugitive dusts are probably causing enough particulate pollution to make the secondary standard unattainable by conventional control techniques.

Approach and Milestones

1. Review and report on adequacy of State Air Pollution Control Implementation Plan to achieve the secondary standards. March 1, 1972.

2. In conjunction with the State and local agencies, prepare report on most probable sources of uncontrollable particulate pollution. April 1, 1972.

3. Report on identifiable measures which can be implemented to eliminate these particulates. May 1, 1972.

4. Complete control strategies as needed for revision of State Air Pollution Control Implementation Plan. June 1, 1972.

Project Manager: Fred Longenberger, Air Quality Branch

4.3 Develop public information program concerning automobile pollutants and the practicality of alternative transportation systems.

Purpose of the Plan

A totally new public information program is needed to focus attention on automobile pollutants and mass transportation. The "Life...Pass It On" campaign has been extremely effective, not only in Region VIII, but also in other EPA regions as well. However, the "Life...Pass It On" approach is positive, non-threatening, and fairly subtle. Because of the severity of Denver's air pollution problem, a new direction is needed.

Approach

The PIO staff proposes an independent new concept (i.e., theme) to hang a public information campaign around. We would like to initiate a dramatically different approach in headlines, copy, and visuals, and new avenues of publicity not previously used.

The theme particulars have not been thoroughly worked out yet. But, we feel the theme should be action oriented, have a sense of urgency about it, and be a "hard" rather than "soft" approach. It should also, in this particular instance, be extremely factual (as opposed to editorial) since

the statistics concerning Denver's air pollution problem are so strong -- in the sense that they can "sell" the public on action.

We are thinking in terms of a headline like "GET DENVER OUT OF THE BIG 6." This headline is filled with impact words, offers an action, and is easy to build an entire campaign around. This headline is also easy to attach to subheads to "GET DENVER OUT OF THE BIG 6."

a. Air Pollution is darkening out lives.

b. Take a friend to work today.

c. Walk for clean air.

We have not used newspaper space in any of our previous campaigns: Now is the time. The space can be donated by not only the Post and News, but also by the many weekly and community papers in the Denver area.

This concept also lends itself well to billboards and "car cards" space in or on buses and taxis.

Mr. Green and key staff members should use the dual-fuel car as often as possible. Excellent press coverage can be achieved with this idea.

A group of :05 and :10 radio messages used as PSA station IDs is proposed. We are certain to get good mileage out of PSA's with these lengths.

We are also thinking along the lines of a weekly newspaper column dealing specifically with Denver air. The column would be run in the Sunday Environmental section of the Post as well as the smaller weeklies in the area. The column would be internally created and submitted to the papers on a regular basis.

A series of hard news stories would supplement this effort.

The NBC station here has been approached about running an air pollution segment in their nightly weather broadcasts. This would involve a stationary camera and time-lapse photography.

The entire campaign would reach its apex with a city-wide eco-day. EPA would act as coordinator of all the local environmental groups. Grade, junior, and senior high schools would participate by devoting fifteen minutes of every class hour to the Denver air problem. Workshops, forums, and panel discussions would back up this effort. Various environment groups could provide speakers.

And, on this particular day, we would put a real push on mass transportation with newspaper, radio, and TV PSA's exhorting people to take a friend to work, walk for clean air, ride the bus, or a bike.

Environmental groups would sponsor an open-to-the-public eco-forum, and some "names" would be attracted enough to participate. Day-long coverage by the local educational TV station could be arranged. The public that wished to participate but was unable to attend in person, could sponsor a neighborhood "watch-in, phone-in" from their neighborhoods -- several neighbors get together and call in questions to the panel.

Eco-day would coincide with the review of the Colorado Implementation Plan by Air and Water and the Congressional Liaison's efforts to work with the State legislature concerning new air legislation.

Simultaneously, we would add a new dimension to our newspaper campaign with a questionaire concerning Denver air. A headline like "Who Is Responsible for Denver's Air Pollution Problem? A Quiz for the Concerned." The questionaire would be answered by the reader, checked against the

correct answers given in the ad, clipped, and mailed to the State legislators. This would give an accurate reading of the public attitudes, point out where additional environmental education is necessary, and, most important, put pressure on the legislature for workable air ordinances.

A spur campaign aimed directly at business and industry is a headline like "CLEAN AIR IS GOOD BUSINESS," stressing tax breaks, lower cost ration, good public relations, and general aesthetics.

This entire campaign would be the first city-wide effort in Denver dealing strictly with air. We can reach virtually every segment of the population, and we will be reaching them through a variety of media. The tremendous momentum built up by this program would, hopefully, result not only in increased awareness but real affirmative action taken by every individual in the community.

4.4 Contact members of state legislature and impress needs for legislation relating to transportation sources of air pollution and environmental legislation.

Approach and Milestones

As a matter of legislative history, the Colorado legislature meets every year but with different rules. During the general sessions, held on the odd years, the legislature is open for any bill sponsored by one or more members of the legislature. During the short sessions, held on the even years, the only items which may be considered by the legislature are those items which fall in categories contained in the Governor's Call.

The Colorado legislature went into session on January 5, 1972 at 10:00 a.m. for the so-called "short session."

The first section of the Governor's Call for the 1972 legislative session contains thirty-three items specifically requested by the Governor.

1. Support the passage by the Colorado legislature of the Colorado Environmental Policy Act. In connection with this legislation, specific meetings with the Speaker of the House, Majority Leader of the House, Majority Whip of the House, Minority Leader of the House, Minority Whip of the House, Chairman of House Committee on Environment, Chairman of Senate Committee on Environment, Majority Leader in the Senate, and Minority Leader in the Senate. By March 15, 1972.

2. Meet and consult with most influential members of State House and Senate to obtain sponsorship of proposed legislation for presentation at the open general session commencing approximately January 9, 1973. To assist the legislative assistant in the Governor's office in preparation of meaningful and effective legislation in the fields of water, air, and solid waste abatement. By June 1, 1972.

Project Manager: Dean Norris, Congressional and Intergovernmental Relations.

APPENDIX A

SUMMARY SCHEDULE

PROJECT AND PROJECT MANAGER	1972 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1973	1974	1975	1976
UPGRADE CLASSIFICATION OF THE SOUTH PLATTE																
Begin contact with interested State agencies	1															
Present position to Colorado Water Pollution Control Commission	29															
State reclassifies river, and standards are adopted						30										
If State of Colorado fails to take action:																
Public Notice for convening Standards Conference							15									
Standards Setting Conference									xx							
Changes in Standards recommended										xx						
Approval of Changes													1xx			
Implement Changes (fully)																12xx
PATRICK J. GODSIL - A&W																
Begin public information program to express the need for upgrading the classification of the South Platte River.																
JACK R. HALLOWELL - PAO	29															
ENSURE ADEQUATE PROVISION FOR PRESENT AND FUTURE WATER NEEDS AND WASTE LOADS																
Survey Waste Water Treatment Plants																
Complete O&M and training needs survey in metropolitan area			1	----------	----------	Continuing Effort	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------
Complete evaluation of data and make recommendations			1													
STANLEY M. SMITH - A&W																
Provide Training and Technical Assistance																
Meet with Colorado Department of Health			15													
Initiate the Program				1												
ELMER M. CHENAULT - A&W																
Expedite Construction Schedules if Feasible																
Grant Offer			1													
Completion of part of Project													4/15			
Completion of remainder of Project														10/15		
STANLEY M. SMITH - A&W																

	1972											1973	1974	1975	1976
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
ENSURE ADEQUATE PROVISION FOR PRESENT AND FUTURE WATER NEEDS AND WASTE LOADS - cont'd															
Develop Efficient Utility Management Program for the Denver Public Waste Water System															
Meet with Denver Metro and COG Project Manager - Discuss Utility Studies	21														
Determine contract needs for additional studies			1												
Discuss EPA contract scope with Metro interest - and Finalize contract proposals			15												
Select contractor					15										
Initiate contract						1									
Complete study											1				
Present results to Denver Metro interests and Negotiate for adoption of results												1			
PATRICK GODSIL - A&W															
Develop Program on Optimizing Water Use															
Contact State and Local Agencies		5													
Review Detailed Water Usage Data			1												
Meet with Denver Water Board			15												
Develop a Public Information Program on Water Use & Re-Use						1									
Continue to coordinate with Denver Water Board	----------O N G O I N G----------														
ALBERT V. SOUKUP - A&W															
PROCESS FIFTY PERMITS															
Processing Permits Applications In the Cache La Poudre and St. Vrain Creek Sub-basins	15														
Inspect Denver Metro to Identify Uninformed or Non-complying Industries			1												
Obtain completed applications for all significant industries			1												
Complete requests for State cert. for all significant industries			1												
Develop interim effluent monitoring plan for major industries				1											
Finalize plan for monitoring							1								
Complete Tech review of applications from significant industries						1									
B. DAVID CLARK - ENF															

	1972												1973	1974	1975	1976
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
SAMPLE AND MONITOR INDUSTRIAL OUTFALLS AND AMBIENT STREAM CONDITIONS																
Describe Quality of the South Platte River and Tributaries		15														
Verify Selected Industrial Effluent Data		1														
Review Data to Identify Need for Additional Sampling			1													
Conduct Sampling Program						1										
Analyze Data from Sampling Program							1									
Develop Continuous Surveillance Program							1									
JOHN E. HARDAWAY - S&A																
HOLD ENFORCEMENT CONFERENCE																
Complete Field Survey By D.F.I., D.C.	x															
Complete Draft of Report			30													
Forward Final Survey Report					1											
Publish Public Notice for Reconvening Conference					30											
Reconvene Conference						27										
Administrator Approval of Conferees Recommendations									1							
Begin Implementation of Recommendations									15							
THOMAS ROGERS - ENF																
ISSUE 180-DAY NOTICES																
180-Day Notice to Great Western Sugar, Ovid, Colo.			x													
Meet with Great Western Sugar officials				x												
Convene Public Hearing					x											
Adequate Waste Treatment Facilities in operation (to reduce BOD load by 16,000 lbs/day)										x						
Fecal Coliform of 1000/100 ml										x						
Dissolved Oxygen 5.0 mg/l (in 30 mile reach downstream)										x						
THOMAS ROGERS - ENF																
180-Day Notice to Great Western Sugar, Greeley, Colo.			x													
Meet with Great Western Officials				x												
Convene Public Hearing					x											
Adequate Waste Treatment Facilities in operation (to reduce BOD load by 16,000 lbs/day										x						
Reduce Coliform Level in Cache La Poudre and South Platte by 50%										x						
THOMAS ROGERS - ENF																

	1972												1973	1974	1975	1976
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
DEVELOP WATER QUALITY MANAGEMENT PLAN AS REQUIRED BY 18 CFR 601																
Assist State and Larimer-Weld Counties Planning Commission	UNDERWAY															
Determine resource requirements needed to assist State and Larimer-Weld Counties				x												
Begin assistance to State and Larimer -Weld Co. Planning Commission					1											
Complete Basin and Regional Plans							1									
PATRICK GODSIL - A&W																
SUPPLEMENT DENVER REGIONAL COG 3(C) PLANNING ACTIVITY TO ACHIEVE REQUIRED OBJECTIVES																
Assign Regional Liaison Officer	7															
Identify Regional Task Force for Tech. Review of DR COG Study	12															
Convene Meeting of Task Force	17															
Task Force Meeting with DR COG 3(C) Consultant	28															
Implement Work Plan on Supplemental Resolutions Required to achieve Allied Reg. 8 Objectives		15														
PATRICK GODSIL - A&W																
IMPROVEMENTS IN AIR QUALITY																
Mobile Sources																
Begin review of the Colo. State Air Pollution Control Plan	30															
Report on possible increased susceptibility of Denver residents to pollutants because of altitude			1													
Report on effectiveness of Federal Motor Vehicle Program as it applies to Denver				1												
Report on expected reduction in pollution from application of Federal Emission Standards for moving sources					1											
Report on expected reduction in pollution from State Motor Vehicle Inspection						1										
Report on the effectiveness and applicability of various transportation control options							19									
Complete control strategy as needed for revision of State Air Pollution Control Implementation Plan								1								
Meet with State Agencies to exchange information			x													
Meet with State and Local Transportation Agencies			x													
Continuing Project: Impact State, County and City legislation which restricts automobile use and promotes mass transit	---------- Continuing Project ----------															
DALE WELLS - A&W																

PROBLEMS ASSESSMENT AND PROPOSED SOLUTIONS RELATING TO PARTICULATE MATTER	1972 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1973	1974	1975	1976
Review and report on adequacy of State Plan			1													
In conjunction with State and Local agencies, prepare a report on probable sources of uncontrollable particulate pollution				1												
Report on measures to eliminate these particulates					1											
Complete control strategies for revision of State Plan						1										
NORMAN HUEY - A&W																
Public information program to focus attention on air pollution caused by mobile sources				1												
JAMES BOWTER - PDS																
Impact Colorado legislature concerning legislation affecting the environment			15													
Meet and consult with members of Colorado legislature to encourage the presentation of new environmental laws for the open session						1										
DEAN MORRIS - PDS																
DEVELOP CONTROL PROGRAM FOR OIL AND HAZARDOUS MATERIALS																
Development of a Mutual Aid Group or groups																
Primary contact,	15															
Formation of group, 1st meeting -					1											
Basic development of group, contingency plan, obtainment of equipment and training of personnel													5/1			
Contingency Plan from non-discharging facilities.																
Inventory started			1													
Primary Sources contacted						1										
Most, if not all, sources contacted										1						
Plans received from primary sources									1							
Investigation of primary sources												1				
Plans received from most or all sources													12/31			
Investigation of all other sources													3/01			
RICHARD M. JONES - S&A																